

suture placed as low as possible in the rectum, and fixed as high as possible. While it might seem that there would be considerable danger of injuring the ureters or great vessels in thus closing the cul-de-sac, Jones says he has never seen trouble from this source in a series of about twenty cases. While the closure of the cul-de-sac in this manner may seem to have little strength, since the sutures include probably nothing but peritoneum, its great value lies in the fact that it throws the weight of the intestines and the intra-abdominal pressure forward onto the symphysis, bladder, and anterior abdominal wall, while an open deep cul-de-sac allows these forces to come against the anterior rectal or posterior vaginal wall.

Etiology and Pathology of Non-tuberculous Renal Infections.—

The theory is advanced by CABOT and CRABTREE (*Surg., Gynec. and Obst.*, 1916, xxiii, 495) that practically all renal infections arise as a result of hematogenous invasion of the kidney by the organism in question, these authors considering the ascending or lymphatic routes as practically negligible in importance. They have reached these conclusions following the study of a considerably series of kidneys presenting infections from organisms other than the tubercle bacillus. It has been generally believed in the past that coccus infections of the kidney are usually hematogenous in origin, but it has been rather generally assumed that bacillary infections reach the kidney by ascent from the bladder. This assumption Cabot thinks to be based wholly on its delightful simplicity, but entirely unsupported by scientific evidence. He sees no reason for denying a hematogenous origin for bacillary any more than for coccic infections; in fact, the former has been the more conclusively proven of the two, for the organisms have been repeatedly found in the blood and subsequently in the urine in cases of renal infection, whereas there are but few instances on record where cocci concerned in renal infection have been demonstrated in the blood. He believes also that the common pyelonephritis—mistermed pyelitis—of pregnancy and of children occurs only as a result of organisms reaching the kidney through the blood stream. In contradistinction to the generally accepted views, Cabot holds that the lesions produced by different types of organisms are more or less characteristic, those caused by the pyogenic group (cocci and pyogenic bacilli) differing essentially from those caused by non-suppurative organisms (colon-typhoid group). The former consists of perinephritic abscesses, capsular abscesses, capsulitis, cortical abscesses, septic infarcts, and diffuse suppuration; the latter of acute pyelitis, acute pyelonephritis, chronic pyelonephritis, and pyonephrosis. Infection of a kidney by organisms of both groups will cause a mixture of the lesions, this fact probably explaining the belief that the colon bacillus can produce abscess of the kidney. Cultures containing both colon bacilli and cocci will frequently be interpreted as showing only colon, as this organisms grows with great rapidity and soon obscures the colonies of cocci. The differences in the types of lesions produced by the two groups of organisms are of considerably more than mere academic interest, as Cabot points out, for they have an important bearing on diagnosis. Since the lesions characteristic of the pyogenic group are comparatively shut off from the lower portions of the kidney, and do not involve the pelvic mucous

membrane, pus is rarely found in any considerable amount in the early stages. The lesions of the non-pyogenic group, however, are situated chiefly in the renal pelvis, and result in early appearance of pus with microorganisms in the urine. There is also a marked difference in the effect on phthalein excretion. Infections with the pyogenic organisms involve chiefly the cortex and very little the convoluted tubules, having therefore little effect on the kidney function as measured by phthalein elimination; the chief lesions of the colon group, however, are in the region of the convoluted tubules, and produce sudden and profound changes in renal function. If, therefore, in the presence of clinical evidence suggestive of renal infection, the freshly drawn urine shows cocci in abundance, with a small amount of albumin, a few red blood cells, and many leukocytes or a little pus, with a normal or nearly normal phthalein excretion, the diagnosis of coccus infection is justified. If, on the other hand, examination of the urine shows many bacilli, a little albumin, and much pus, with marked diminution of the phthalein excretion, a diagnosis of colon bacillus infection is unavoidable. Since the suppurative lesions concern those parts of the kidney relatively inaccessible to drugs, their treatment must in the majority of cases be operative, but the lesions of the colon group, involving chiefly portions of the kidney which are relatively accessible to the formalin-containing drugs, a thorough trial of medical treatment in these cases is often advisable. It thus becomes evident that an accurate diagnosis between the two types of non-tuberculous renal infection is of great practical importance from the standpoint of therapy.

Severe Intraperitoneal Hemorrhage from Small Superficial Veins of a Myomatous Uterus.—A most unusual and very interesting case of a condition which very seriously threatened the patient's life has been reported by GERSTENBERG (*Zentralbl. f. Gyn.*, 1916, xl, 795). The patient was a nurse, aged thirty-nine years. While on night duty, taking care of a man whom with great difficulty she was able to lift or move, she was seized one night a few days before her menstrual period with several fainting spells. She attributed these to her run down condition, with the hard work that her night duty entailed. The next night she had another, more severe attack, whereupon she took an alcoholic stimulant and went home to bed, where she was found the next morning in a state of collapse. On examination by Gerstenberg at this time the uterus was found to be small and retroverted, with a hard, roughly spherical tumor somewhat larger than a fetal head, lying above it. The diagnosis was obviously a subserous myoma; the advice given was rest and building up measures, to be followed later by operation. The next morning the author was urgently summoned again, and found the patient pulseless and presenting unmistakable signs of severe internal hemorrhage. By means of active stimulation and abdominal compression it was possible to transport her to the clinic, where the abdomen was immediately opened, practically without anesthesia. The abdominal cavity was found filled with an enormous amount of dark, almost entirely uncoagulated blood, apparently of venous origin. A rapid search of the tubes, ovaries, fibroid tumor, bladder, and intestines failed to show any source of the hemorrhage. Only after thoroughly cleansing the pelvis and drawing the uterus and